

IN THE CLAIMS:

1. (Original) Malonamide derivatives of formula I



wherein

D is a substituted or unsubstituted bivalent malonamide moiety, or a derivative thereof,

A is a unsubstituted or substituted moiety of up to 40 carbon atoms of the formula: $-\text{L}-(\text{M}-\text{L}')_{\alpha}$, where L is a 5, 6 or 7 membered cyclic structure, preferably selected from the group consisting of aryl, heteroaryl, arylene and heteroarylene, bound directly to D, L' comprises an optionally substituted cyclic moiety having at least 5 members, preferably selected from the group consisting of aryl, heteroaryl, aralkyl, cycloalkyl and heterocyclyl, M is a bond or a bridging group having at least one atom, α is an integer of from 1-4; and each cyclic structure of L and L' contains 0-4 members of the group consisting of nitrogen, oxygen and sulfur, wherein L' is preferably substituted by at least one substituent selected from the group consisting of $-\text{SO}_2\text{R}_x$, $-\text{C}(\text{O})\text{R}_x$ and $-\text{C}(\text{NR}_y)\text{R}_z$

B is a substituted or unsubstituted, up to tricyclic aryl or heteroaryl moiety of up to 30 carbon atoms, preferably of up to 20 carbon atoms, comprising at least one 5-, 6-, or 7-membered cyclic structure, preferably a 5- or 6-membered cyclic structure, bound

directly to D containing 0-4 members of the group consisting of nitrogen, oxygen and sulfur, wherein said cyclic structure directly bound to D is preferably selected from the group consisting of aryl, heteroaryl and heterocyclyl,

R_y is hydrogen or a carbon based moiety of up to 24 carbon atoms optionally containing heteroatoms selected from N, S and O and optionally halosubstituted, up to per halo,

R_z is hydrogen or a carbon based moiety of up to 30 carbon atoms optionally containing heteroatoms selected from N, S and O and optionally substituted by halogen, hydroxy and carbon based substituents of up to 24 carbon atoms, which optionally contain heteroatoms selected from N, S and O and are optionally substituted by halogen;

R_x is R_z or NR_aR_b , where R_a and R_b are

a) independently hydrogen, a carbon based moiety of up to 30 carbon atoms optionally containing heteroatoms selected from N, S and O and optionally substituted by halogen, hydroxy and carbon based substituents of up to 24 carbon atoms, which optionally contain heteroatoms selected from N, S and O and are optionally substituted by halogen, or

$-\text{OSi}(R_f)_3$ where R_f is hydrogen or a carbon based moiety of up to 24 carbon atoms optionally containing heteroatoms selected from N, S and O and optionally

substituted by halogen, hydroxy and carbon based substituents of up to 24 carbon atoms, which optionally contain heteroatoms selected from N, S and O and are optionally substituted by halogen;

or

- b) R_a and R_b together form a 5-7 member heterocyclic structure of 1-3 heteroatoms selected from N, S and O, or a substituted 5-7 member heterocyclic structure of 1-3 heteroatoms selected from N, S and O substituted by halogen, hydroxy or carbon based substituents of up to 24 carbon atoms, which optionally contain heteroatoms selected from N, S and O and are optionally substituted by halogen; or
- c) one of R_a or R_b is $-C(O)-$, a C_1-C_5 divalent alkylene group or a substituted C_1-C_5 divalent alkylene group bound to the moiety L to form a cyclic structure with at least 5 members, wherein the substituents of the substituted C_1-C_5 divalent alkylene group are selected from the group consisting of halogen, hydroxy, and carbon based substituents of up to 24 carbon atoms, which optionally contain heteroatoms selected from N, S and O and are optionally substituted by halogen;

where B is substituted, L is substituted or L' is additionally substituted, the substituents are selected from the group consisting of halogen, up to per-halo, and W_γ , where γ is 0-3; wherein each W is independently selected from the group consisting of $-CN$, $-CO_2R$, $-C(O)NR^5R^5$, $-C(O)-R^5$, $-NO_2$,

-OR⁵, -SR⁵, -SO₂R⁵, -SO₃H, -NR⁵R⁵, -NR⁵C(O)OR⁵, -NR⁵C(O)R⁵, -Q-Ar, and carbon based moieties of up to 24 carbon atoms, optionally containing heteroatoms selected from N, S and O and optionally substituted by one or more substituents independently selected from the groups consisting of -CN, -CO₂R, -C(O)NR⁵R⁵, -C(O)-R⁵, -NO₂, -OR⁵, -SR⁵, -SO₂R⁵, -SO₃H, -NR⁵R⁵, -NR⁵C(O)OR⁵, -NR⁵C(O)R⁵ and halogen up to per-halo; with each R⁵ independently selected from H or a carbon based moiety of up to 24 carbon atoms, optionally containing heteroatoms selected from N, S and O and optionally substituted by halogen, wherein Q is -O-, -S-, -N(R⁵)-, -(CH₂)_β-, -C(O)-, -CH(OH)-, -(CH₂)_βO-, -(CH₂)_βS-, -(CH₂)_βN(R⁵)-, -O(CH₂)_β-, -CHHal-, -CHal₂-, -S-(CH₂)- and -N(R⁵)(CH₂)_β- where β = 1-3, and Hal is halogen; and

Ar is 5- or 6-member aromatic structure containing 0-2 members selected from the group consisting of nitrogen, oxygen and sulfur, which is optionally substituted by halogen, up to per-halo, and optionally substituted by Z_{δ1} wherein δ1 is 0 to 3 and each Z is independently selected from the group consisting -CN, -CO₂R⁵, -C(O)NR⁵R⁵, -C(O)-R⁵, -NO₂, -OR⁵, -SR⁵, -SO₂R⁵, -SO₃H, -NR⁵R⁵, -NR⁵C(O)OR⁵, -NR⁵C(O)R⁵, and a carbon based moiety of up to 24 carbon atoms, optionally containing heteroatoms selected from N, S and O and optionally substituted by one or more substituents selected from the group consisting of -CN, -CO₂R⁵, -C(O)NR⁵R⁵, -C(O)-R⁵, -NO₂, -OR⁵, -SR⁵, -SO₂R⁵, -SO₃H, -NR⁵R⁵, -NR⁵C(O)OR⁵, -NR⁵C(O)R⁵, and

the physiologically acceptable derivatives, salts and solvates thereof.

2. (Original) Malonamide derivative according to claim 1, characterised in that each M independently from one another represents a bond OR is a bridging group, selected from the group consisting of $(CR^5R^5)_h$, or $(CHR^5)_h-Q-(CHR^5)_i$, wherein

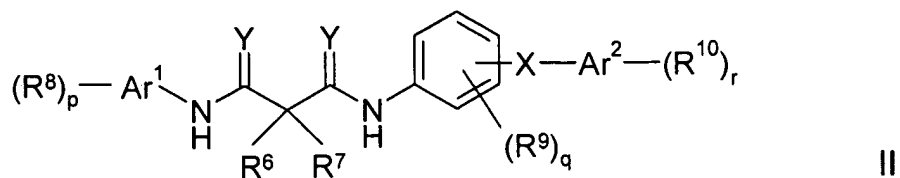
Q is selected from a group consisting of O, S, $N-R^5$, $(CHal_2)_j$, $(O-CHR^5)_j$, $(CHR^5-O)_j$, $CR^5=CR^5$, $(O-CHR^5CHR^5)_j$, $(CHR^5CHR^5-O)_j$, C=O, C=S, $C=NR^5$, $CH(OR^5)$, $C(OR^5)(OR^5)$, $C(=O)O$, $OC(=O)$, $OC(=O)O$, $(C=O)N(R^5)C(=O)$, $OC(=O)N(R^5)$, $N(R^5)C(=O)O$, $CH=N-NR^5$, S=O, SO_2 , SO_2NR^5 und NR^5SO_2 , wherein

R^5 is in each case independently selected from the meanings given above, preferably hydrogen, halogen, alkyl, aryl, aralkyl,

h, i are independently from each other 0, 1, 2, 3, 4, 5, or 6, preferably 0, 1, 2 or 3, and

j is 0, 1, 2, 3, 4, 5 or 6, preferably 0, 1, 2 or 3.

3. (Currently Amended) Malonamide derivative according to claim 1 [[or 2]], selected from the compounds of formula II,



wherein

Ar^1 , Ar^2 are selected independently from one another from aromatic hydrocarbons containing 6 to 14 carbon atoms and ethylenical unsaturated or aromatic heterocyclic residues containing 3 to 10 carbon atoms and one or two heteroatoms, independently selected from N, O and S,

R^6 , R^7 are independently selected from the meanings given for R^8 , R^9 and R^{10} ,
or R^6 and R^7 together form a carbocyclic residue comprising 3 to 7 carbon atoms or a heterocyclic residue comprising 1, 2 or 3 hetero atoms, selected from the group consisting of O, N and S, and 2 to 6 carbon atoms, said carbocyclic or heterocyclic residue being unsubstituted or comprising 1, 2 or 3 substituents, selected from the meanings given for R^8 , R^9 and R^{10} ,

R^8 , R^9 and R^{10} are independently selected from a group consisting of H, A, cycloalkyl comprising 3 to 7 carbon atoms, Hal, CH_2Hal , $\text{CH}(\text{Hal})_2$, $\text{C}(\text{Hal})_3$, NO_2 , $(\text{CH}_2)_n\text{CN}$, $(\text{CH}_2)_n\text{NR}^{11}\text{R}^{12}$, $(\text{CH}_2)_n\text{OR}^{11}$, $(\text{CH}_2)_n\text{O}(\text{CH}_2)_k\text{NR}^{11}\text{R}^{12}$, $(\text{CH}_2)_n\text{COOR}^{12}$, $(\text{CH}_2)_n\text{CONR}^{11}\text{R}^{12}$, $(\text{CH}_2)_n\text{NR}^{11}\text{COR}^{13}$, $(\text{CH}_2)_n\text{NR}^{11}\text{CONR}^{11}\text{R}^{12}$, $(\text{CH}_2)_n\text{NR}^{11}\text{SO}_2\text{A}$,

$(\text{CH}_2)_n\text{SO}_2\text{NR}^{11}\text{R}^{12}$, $(\text{CH}_2)_n\text{S}(\text{O})_u\text{R}^{13}$, $(\text{CH}_2)_n\text{OC}(\text{O})\text{R}^{13}$,
 $(\text{CH}_2)_n\text{COR}^{13}$, $(\text{CH}_2)_n\text{SR}^{11}$, $\text{CH}=\text{N}-\text{OA}$, $\text{CH}_2\text{CH}=\text{N}-\text{OA}$,
 $(\text{CH}_2)_n\text{NHOA}$, $(\text{CH}_2)_n\text{CH}=\text{N}-\text{R}^{11}$, $(\text{CH}_2)_n\text{OC}(\text{O})\text{NR}^{11}\text{R}^{12}$,
 $(\text{CH}_2)_n\text{NR}^{11}\text{COOR}^{12}$, $(\text{CH}_2)_n\text{N}(\text{R}^{11})\text{CH}_2\text{CH}_2\text{OR}^{13}$,
 $(\text{CH}_2)_n\text{N}(\text{R}^{11})\text{CH}_2\text{CH}_2\text{OCF}_3$, $(\text{CH}_2)_n\text{N}(\text{R}^{11})\text{C}(\text{R}^{13})\text{HCOOR}^{12}$,
 $\text{C}(\text{R}^{13})\text{HCOR}^{12}$, $(\text{CH}_2)_n\text{N}(\text{R}^{11})\text{CH}_2\text{CH}_2\text{N}(\text{R}^{12})\text{CH}_2\text{COOR}^{12}$,
 $(\text{CH}_2)_n\text{N}(\text{R}^{11})\text{CH}_2\text{CH}_2\text{NR}^{11}\text{R}^{12}$, $\text{CH}=\text{CHCOOR}^{11}$,
 $\text{CH}=\text{CHCH}_2\text{NR}^{11}\text{R}^{12}$, $\text{CH}=\text{CHCH}_2\text{NR}^{11}\text{R}^{12}$,
 $\text{CH}=\text{CHCH}_2\text{OR}^{13}$, $(\text{CH}_2)_n\text{N}(\text{COOR}^{11})\text{COOR}^{12}$,
 $(\text{CH}_2)_n\text{N}(\text{CONH}_2)\text{COOR}^{11}$, $(\text{CH}_2)_n\text{N}(\text{CONH}_2)\text{CONH}_2$,
 $(\text{CH}_2)_n\text{N}(\text{CH}_2\text{COOR}^{11})\text{COOR}^{12}$,
 $(\text{CH}_2)_n\text{N}(\text{CH}_2\text{CONH}_2)\text{COOR}^{11}$,
 $(\text{CH}_2)_n\text{N}(\text{CH}_2\text{CONH}_2)\text{CONH}_2$, $(\text{CH}_2)_n\text{CHR}^{13}\text{COR}^{11}$,
 $(\text{CH}_2)_n\text{CHR}^{13}\text{COOR}^{11}$, $(\text{CH}_2)_n\text{CHR}^{13}\text{CH}_2\text{OR}^{14}$, $(\text{CH}_2)_n\text{OCN}$
 and $(\text{CH}_2)_n\text{NCO}$, wherein

R^{11} , R^{12} are independently selected from a group consisting of H,
 A, $(\text{CH}_2)_m\text{Ar}^3$ and $(\text{CH}_2)_m\text{Het}$, or in $\text{NR}^{11}\text{R}^{12}$,

R^{11} and R^{12} form, together with the N-Atom they are bound to, a 5-,
 6- or 7-membered heterocyclous which optionally contains
 1 or 2 additional hetero atoms, selected from N, O and S,

R^{13} , R^{14} are independently selected from a group consisting of H,
 Hal, A, $(\text{CH}_2)_m\text{Ar}^4$ and $(\text{CH}_2)_m\text{Het}$,

A is selected from the group consisting of alkyl, alkenyl,
 cycloalkyl, alkylencycloalkyl, alkoxy and alkoxyalkyl,

Ar^3, Ar^4 are independently from one another aromatic hydrocarbon residues comprising 5 to 12 and preferably 5 to 10 carbon atoms which are optionally substituted by one or more substituents, selected from a group consisting of A, Hal, NO_2 , CN, OR^{15} , $NR^{15}R^{16}$, $COOR^{15}$, $CONR^{15}R^{16}$, $NR^{15}COR^{16}$, $NR^{15}CONR^{15}R^{16}$, $NR^{16}SO_2A$, COR^{15} , $SO_2R^{15}R^{16}$, $S(O)_uA$ and $OOCR^{15}$,

Het is a saturated, unsaturated or aromatic heterocyclic residue which is optionally substituted by one ore more substituents, selected from a group consisting of A, Hal, NO_2 , CN, OR^{15} , $NR^{15}R^{16}$, $COOR^{15}$, $CONR^{15}R^{16}$, $NR^{15}COR^{16}$, $NR^{15}CONR^{15}R^{16}$, $NR^{16}SO_2A$, COR^{15} , $SO_2R^{15}R^{16}$, $S(O)_uA$ and $OOCR^{15}$,

R^{15}, R^{16} are independently selected from a group consisting of H, A, and $(CH_2)_mAr^6$, wherein

Ar^6 is a 5- or 6-membered aromatic hydrocarbon which is optionally substituted by one or more substituents selected from a group consisting of methyl, ethyl, propyl, 2-propyl, tert.-butyl, Hal, CN, OH, NH_2 and CF_3 ,

k, m and n are independently of one another 0, 1, 2, 3, 4, or 5,

X represents a bond or is $(CR^{11}R^{12})_h$, or $(CHR^{11})_h-Q-(CHR^{12})_i$, wherein

Q is selected from a group consisting of O, S, N-R¹⁵, (CHal₂)_j, (O-CHR¹⁸)_j, (CHR¹⁸-O)_j, CR¹⁸=CR¹⁹, (O-CHR¹⁸CHR¹⁹)_j, (CHR¹⁸CHR¹⁹-O)_j, C=O, C=S, C=NR¹⁵, CH(OR¹⁵), C(OR¹⁵)(OR²⁰), C(=O)O, OC(=O), OC(=O)O, C(=O)N(R¹⁵), N(R¹⁵)C(=O), OC(=O)N(R¹⁵), N(R¹⁵)C(=O)O, CH=N-O, CH=N-NR¹⁵, S=O, SO₂, SO₂NR¹⁵ and NR¹⁵SO₂, wherein

R¹⁸, R¹⁹, R²⁰ are independently selected from the meanings given for R⁸, R⁹ and R¹⁰, preferably independently selected from the group consisting of H, A, Hal, CH₂Hal, CH(Hal)₂, C(Hal)₃, NO₂, (CH₂)_nCN, (CH₂)_nOR¹¹, (CH₂)_nNR¹¹R¹², (CH₂)_nO(CH₂)_kNR¹¹R¹², (CH₂)_nCOOR¹³, (CH₂)_nCONR¹¹R¹², (CH₂)_nNR¹¹COR¹³, (CH₂)_nNR¹¹CONR¹¹R¹², (CH₂)_nNR¹¹SO₂A, (CH₂)_nSO₂NR¹¹R¹², (CH₂)_nS(O)_uR¹³, (CH₂)_nCOR¹³, (CH₂)_nSR¹¹, (CH₂)_nNHOA and (CH₂)_nNR¹¹COOR¹³,

h, i are independently from each other 0, 1, 2, 3, 4, 5, or 6, and

j is 1, 2, 3, 4, 5, or 6,

Y is selected from O, S, NR²¹, C(R²²)-NO₂, C(R²²)-CN and C(CN)₂, wherein

R²¹ is independently selected from the meanings given for R¹³, R¹⁴ and

R²² is independently selected from the meanings given for R¹¹, R¹²,

p, r are independently from one another 0, 1, 2, 3, 4 or 5,

q is 0, 1, 2, 3 or 4, preferably 0, 1 or 2,

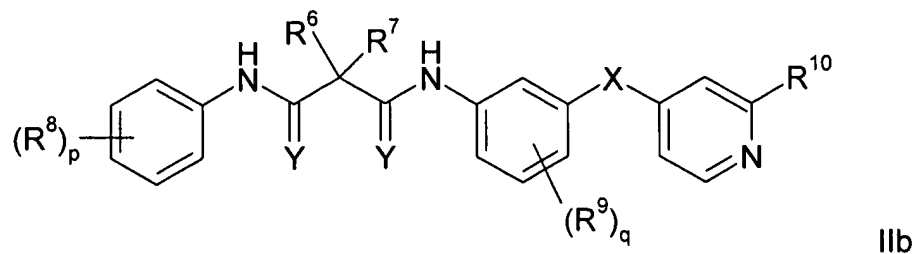
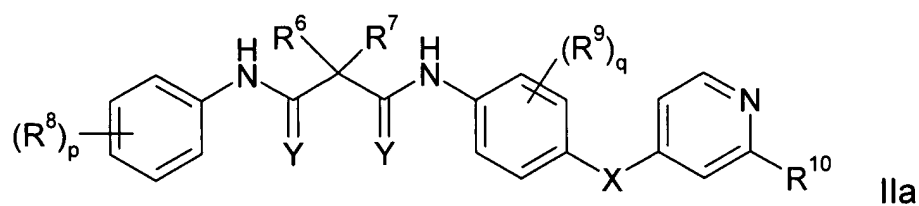
u is 0, 1, 2 or 3, preferably 0, 1 or 2,

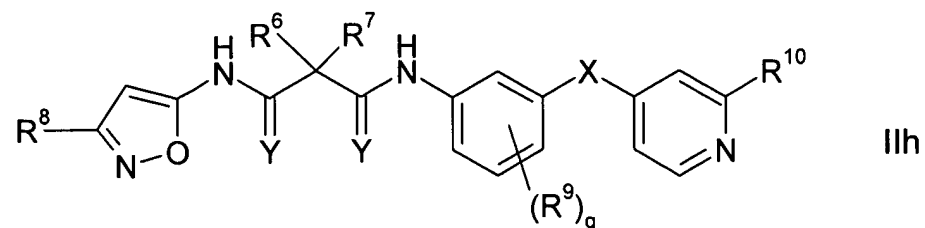
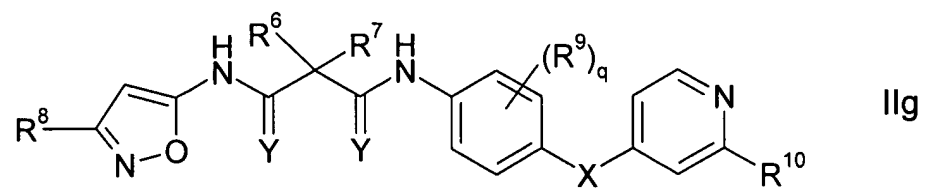
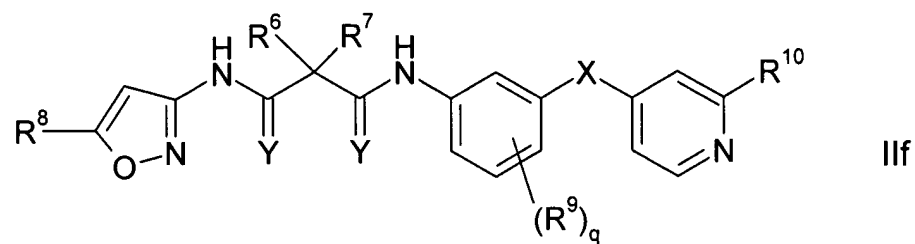
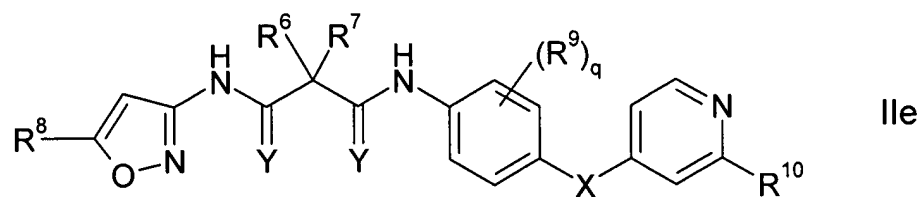
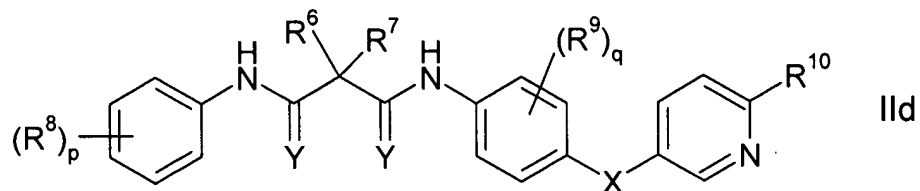
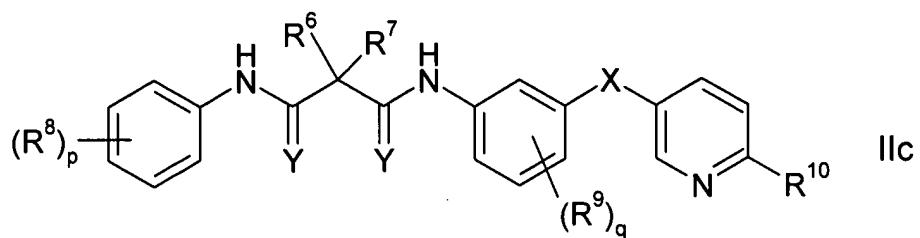
and

Hal is independently selected from a group consisting of F, Cl, Br and I;

and the pharmaceutically acceptable derivatives, salts and solvates thereof.

4. (Currently Amended) Malonamide derivative according to ~~one of the~~ claims claim 1 to 3, selected from the compounds of formula IIa, IIb, IIc, IId, IIe, IIg and IIh,





wherein R^6 , R^7 , R^8 , p, X, Y, R^9 , q are as defined in claim 3 and R^{10} is H or as defined in claim 3;

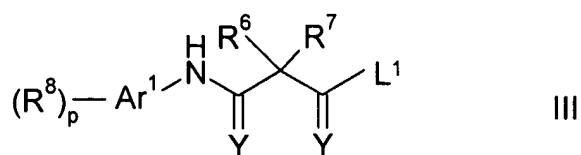
and the pharmaceutically acceptable derivatives, salts and solvates thereof.

5. (Currently Amended) Malonamide derivative according to ~~one of the~~ claims claim 1, ~~2 or 3~~ selected from the compounds (1) to (228) of table 1; and the physiologically acceptable derivatives, salts and solvates thereof.
6. (Currently Amended) Malonamide derivative according to ~~one of the~~ claims claim 1 ~~to 5~~ as a medicament.
7. (Currently Amended) Malonamide derivative according to ~~one of the~~ claims claim 1 ~~to 5~~ as a kinase inhibitor.
8. (Original) Malonamide derivative according to claim 7, characterized in that the kinases are selected from raf-kinases and VEGFR kinases.
9. (Currently Amended) Pharmaceutical composition, characterized in that it contains one or more compounds according to ~~one of the claims~~ claim 1 ~~to 5~~.
10. (Currently Amended) Pharmaceutical composition according to claim 9, characterised in that it contains one or more additional compounds, selected from the group consisting of physiologically acceptable excipients, auxiliaries, adjuvants, carriers and pharmaceutical active ingredients ~~other than the compounds according to one of the claims~~ claim 1 ~~to 5~~.

11. (Currently Amended) Process for the manufacture of a pharmaceutical composition, characterised in that one or more compounds according to ~~one of the claims~~ claim 1 to 5 and one or more compounds, selected from the group consisting of carriers, excipients, auxiliaries and pharmaceutical active ingredients other than the compounds according to ~~one of the claims~~ claim 1 to 5 is processed by mechanical means into a pharmaceutical composition that is suitable as dosageform for application and/or administration to a patient.
12. (Currently Amended) Use of a compound according to ~~one of the claims~~ claim 1 to 5, as a pharmaceutical.
13. (Currently Amended) Use of a compound according to ~~one of the claims~~ claim 1 to 5, in the treatment and/or prophylaxis of disorders.
14. (Currently Amended) Use of a compound according to ~~one of the claims~~ claim 1 to 5, for producing a pharmaceutical composition for the treatment and/or prophylaxis of disorders.
15. (Currently Amended) Use according to claim 13 ~~or 14~~, characterised in that the disorders are caused, mediated and/or propagated by kinases selected from raf-kinases and VEGFR kinases.
16. (Currently Amended) Use according to claim ~~13, 14 or 15~~, characterised in that the disorders are selected from the group consisting of hyperproliferative and nonhyperproliferative disorders.
17. (Currently Amended) Use according to claim ~~13, 14, 15 or 16~~, characterised in that the disorder is cancer.

18. (Currently Amended) Use according to claim ~~13, 14, 15 or 16~~, characterised in that the disorder is noncancerous.
19. (Currently Amended) Use according to claim ~~13, 14, 15, 16 or 18~~, characterised in that the noncancerous disorders are selected from the group consisting of psoriasis, arthritis, inflammation, endometriosis, scarring, benign prostatic hyperplasia, immunological diseases, autoimmune diseases and immunodeficiency diseases.
20. (Currently Amended) Use according to ~~one of the claims 13 to~~ claim 17, characterised in that the disorders are selected from the group consisting of brain cancer, lung cancer, squamous cell cancer, bladder cancer, gastric cancer, pancreatic cancer, hepatic cancer, renal cancer, colorectal cancer, breast cancer, head cancer, neck cancer, oesophageal cancer, gynaecological cancer, thyroid cancer, lymphoma, chronic leukaemia and acute leukaemia.
21. (Currently Amended) Use according to ~~one of the claims~~ claim 13 ~~or 16~~, characterised in that the disorders are selected from the group consisting of arthritis, restenosis; fibrotic disorders; mesangial cell proliferative disorders, diabetic nephropathy, malignant nephrosclerosis, thrombotic microangiopathy syndromes, organ transplant rejection, glomerulopathies, metabolic disorders, inflammation and neurodegenerative diseases.
22. (Currently Amended) Use according to ~~one of the claims~~ claim 13 ~~to 17~~, characterised in that the disorders are selected from the group consisting of rheumatoid arthritis, inflammation, autoimmune disease, chronic obstructive pulmonary disease, asthma, inflammatory bowel disease, fibrosis, atherosclerosis, restenosis, vascular disease, cardiovascular disease, inflammation, renal disease and angiogenesis disorders.

23. (Currently Amended) Use of a compound according to ~~one of the claims~~ claim 1 to 5, as a kinase inhibitor.
24. (Original) Use according to claim 23, characterised in that the kinase is one or more raf-kinases, selected from the group consisting of A-Raf, B-Raf and Raf-1.
25. (Currently Amended) Method for the treatment and/or prophylaxis of disorders, characterised in that one or more compounds according to ~~one of the claims~~ claim 1 to 5 is administered to a patient in need of such a treatment.
26. (Currently Amended) Method according to claim 25, characterised in that the one or more compounds ~~according to one of the claims claim 1 to 5~~ are administered as a pharmaceutical composition according to claim 9.
27. (Currently Amended) Method for the treatment and/or prophylaxis of disorders according to claim 26, ~~characterised in that the disorders are as defined in one of the claims 15 to 22.~~
28. (Original) Method for the treatment according to claim 27, characterised in that the disorders is cancerous cell growth mediated by one or more kinases.
29. (Original) Method for producing compounds of formula II, characterized in that
 - a) a compound of formula III

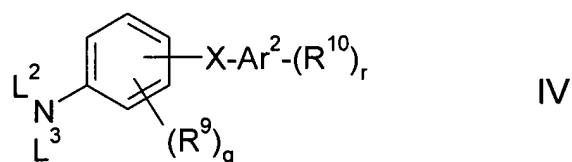


wherein

L^1 is Cl, Br, I, OH, an esterified OH-group or a diazonium moiety, and R^6 , R^7 , R^8 , p , Ar^1 , Y are as defined in claim 3,

is reacted

b) with a compound of formula IV,



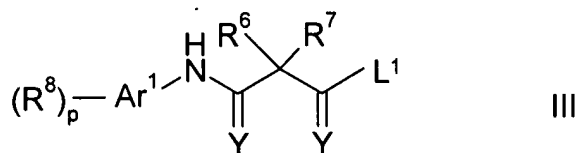
wherein

L^2 , L^3 are independently from one another H or a metal ion, and R^9 , q , X , Ar^2 , R^{10} and r are as defined in claim 3,

and optionally

c) isolating and/or treating the compound of formula II obtained by said reaction with an acid, to obtain the salt thereof.

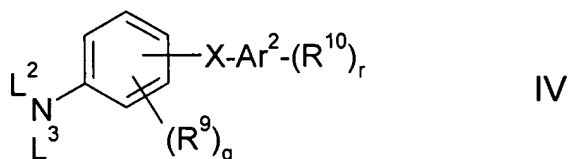
~~29~~ 30. (Currently Amended) Compound of formula III,



wherein

L^1 is Cl, Br, I, OH, an esterified OH-group or a diazonium moiety, and R^6 , R^7 , R^8 , p , Ar^1 , Y are as defined in claim 3.

~~30~~ 31. (Currently Amended) Compound of formula IV,



wherein

L^2 , L^3 are independently from one another H or a metal ion, and R^9 , q , X , Ar^2 , R^{10} and r are as defined in claim 3.